Nutrition News
PUBLISHED BY NATIONAL DAIRY COUNCIL · CHICAGO

OUR FOOD MONEY — IS IT WISELY INVESTED?

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In these days of much complaining about the poor returns on one's investments it is interesting to contemplate how little thought most people give to the question of how best to invest money in food in view of the fact that from 25 to 50 per cent of the family income (depending on its size) has to be expended on food. It seems strange that not more consideration has been given by the public at large to the returns that should be looked for from the investment of so large a part of their income.

Interest in this question has not at all kept pace with the accumulation of facts about foods and the contributions they make to health, happiness, and efficiency. Doubtless this is in large part due to the fact that dietary indiscretions are not followed promptly and obviously by their bad effects, which makes it hard to convince people that improvements in food habits can result in better health, a longer prime of life, and a more vigorous old age.

Nutrition Education Needed

The more facts we get concerning the food habits of all sorts of economic groups in cities, small towns, villages, and rural communities, the more are we impressed with the need for educating our people in nutrition. The place to begin is with the children in the schools. Why is it not quite as important to teach children about our common foods and what they do for us, as it is to teach them how to calculate the interest for 9 months on $175 invested at 2½ per cent? From the point of view of the nutritionist it seems more important, if we are to have a nation of healthy and efficient people — a result which would contribute to their being able to work more effectively and get together more than $175 to invest!

The school lunch should be made a part of the program of educating the school child even if nothing else can be done by way of food education. Teaching a child how to select a good lunch may well be one of the most important things we can do for him. It cannot help but lead to better food habits and hence, increased health and happiness. It is not difficult to train children while in school to such knowledge of food values that when they go out from the school to work and have to buy their lunches at a soda fountain they will realize that 25 cents spent on a cup of cream of tomato soup, an egg sandwich, and a glass of milk is much more wisely invested than if spent on a ham sandwich, cake, and coffee, the first lunch furnishing three fourths as many calories (which pleases the person who does not wish to put on weight), about six times as much calcium, the same amount of iron, three times as much vitamin A, seven times as much vitamin B_1, forty-two times as much vitamin C as the second lunch.

Vitamins Obtained from Foods

One result of this kind of education should be that of making our people better able to judge advertisements and radio broadcasts about food and food products. Just now one very desirable result would be that of having people realize that in spite of all the talk about vitamin preparations of all sorts, the best way to get an adequate supply of the vitamins is to include them in the diet in the form of milk, fruits, and vegetables. These protective foods, if

Doctor MacLeod

eaten in proper quantities, will furnish the necessary minerals and vitamins in all cases excepting those in which for some special reason there is need for larger amounts than can be obtained from food.

On the whole it is better to buy one's vitamins at the grocery store rather than over the drug counter. A good guide to the wise investing of money in food is that given by Sherman. He recommends that—

(1) at least as much of the food money be spent for milk (including cream and cheese when used) as for meats, poultry, and fish; and

(2) at least as much for fruits and vegetables as for meats, poultry, and fish.

This rule seems to work well whether the income be high or low and if followed would mean wise investing of food money and good returns on the investment.

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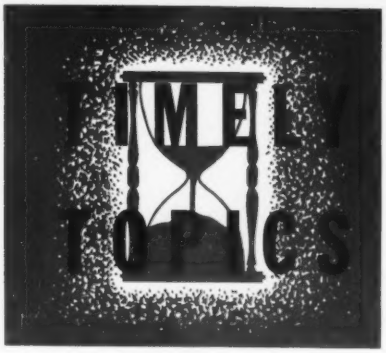
Glances AT NUTRITION RESEARCH



During 1938-1939, 322 projects in Foods and Nutrition were completed or in progress in 57 colleges and universities in the United States, and in the Bureau of Home Economics, U. S. Department of Agriculture.

Thiamin Deficiency — Beriberi has been produced in four healthy young American women, by giving them for 21 weeks a diet almost completely lacking in thiamin (vitamin B_1). Mental depression, lack of appetite, digestive disturbances, disturbed heart action, and occasional tenderness of the muscles of the calves of the legs were the chief symptoms they suffered on this diet. All the symptoms disappeared when they were given thiamin.

—Science 91:9 (March 22) 1940.

Calcium and Lead — A high level of calcium in the diet appears to prevent absorption of lead from the intestinal tract. Lead is present in many common foods, and may be detrimental to health if it accumulates in the body.

Young rats all grew poorly when fed diets containing different amounts of calcium and lead; but when their bones were analyzed, it was found that the more calcium they had in their diet, the less lead was present in their bones.

—J. Amer. Med. Assn. 114:2457 (June 22) 1940.

Diet and Health—An individual's state of nutrition affects his resistance to tuberculosis. Deficiency of vitamin A, for example, seems to lower one's resistance.

A study of the dietary habits of tuberculous children has revealed the presence of many dietary deficiencies. One thousand children were included in the study. Analysis of their food intake showed that 63.1 per cent of the diets were deficient in milk and other good sources of vitamin A; 84.6 per cent did not contain sufficient fruits and vegetables to provide an adequate vitamin C intake; and 24.3 per cent were deficient in high quality proteins such as those in milk, eggs, and meat.

Improvement of the diet, including an increase in the milk intake to one quart daily, resulted in greatly improved physical condition of the children. This may have been due in part to the increased vitamin A intake. In addition to vitamin A, milk, of course, is a good source of calcium and other constituents which will improve the general state of nutrition.

—J. Am. Diet.. Assn. 16:313 (April) 1940.

Vitamin A in Milk — A report on the vitamin A content of milk has recently been published under the auspices of the Council on Foods of the American Medical Association. One quart of milk was found to provide from 1,000 to 2,000 international units, or approximately one fourth to one half of the vitamin A required daily.

The Council on Foods says: "Milk is an excellent source of vitamin A, as well as other dietary essentials. The observations emphasize the necessity of giving particular attention to the vitamin A content of the diet if for any reason it is not possible to secure the large amounts of milk properly recommended for daily consumption."

—Hygeia, June 1940, page 544.

Adequate national defense requires the highest standards of health, nutrition, and physical fitness for everyone. Miss Harriett Elliott, Consumer Advisor on the National Defense Advisory Commission, urges that Home Economists everywhere aid in strengthening local nutrition projects, especially those which deal with the proper choice of nourishing meals. School lunches were mentioned as of particular importance.

The job of feeding the hungry youths makes the CCC the nation's biggest housekeeper. A herd of 45,000 cows would be needed to supply all the dairy products, including 6,750,000 gallons of milk and 13,500,000 pounds of butter, consumed in one year by the 300,000 young men enrolled in the Civilian Conservation Corps.

Foods served in restaurants reflect changing food tastes of the population. According to an editorial in the J. Amer. Diet. Assn., the demand for a quick lunch has been reflected in a 215 per cent increase (since 1917) in the consumption of sandwiches. Greater awareness of the essential place of the protective foods in good nutrition has been largely responsible for the following increases since 1917: milk, 62 per cent; salads, 110 per cent; fresh fruit, 39 per cent; fresh vegetables, 35 per cent; cheese, 40 per cent.

A STUDY OF DIET IN RELATION TO TEETH

By Dr. Julian D. Boyd
Department of Pediatrics
State University of Iowa

For many years attention has been directed toward improved oral hygiene, yet the incidence of tooth decay has not been correspondingly lessened. It remains an almost universal scourge of childhood. Throughout the period of growth its progress is outstanding as compared with the lessened incidence seen in the adult. It would be fortunate if tooth decay might be considered as a purely local disturbance. The intimate relation between the soundness of teeth and the proper functioning of the remainder of the body is well recognized, and this makes the problem of tooth decay one which concerns all who are interested in the field of health.

Good Diet Controls Decay

About twelve years ago, Dr. C. L. Drain noted that children who were receiving controlled diets showed marked hardening of the dentin at the base of tooth cavities, of such a degree that the decay became entirely arrested and failed to show further progression as long as the dietary regimen was maintained. These observations have been extended throughout the past twelve years and have confirmed the earlier conclusions.

The control of caries has been most effective in children whose diets were under strict supervision. Some individual children have been observed for periods of many years, and have passed from the initial stage of florid and extensive caries to one of complete freedom from further decay. On the other hand, children not receiving controlled diets showed definite progression of dental decay.

The age of the patient seems to play an important part in the development or extension of caries. In all of the children included in this study, the tendency toward progression of caries was increased during the teen ages. These are periods of rapid growth and increased need for careful supervision of diet.

The diets which have proved effective for tooth preservation have differed from those commonly used in their greater content of milk, vegetables, fruits, eggs, and cod liver oil. In other words, they are composed largely of the so-called **protective foods,** or those which are high in their content of essential minerals, vitamins, or proteins which frequently are deficient in many foods in general use.

Milk Important in Diet

The basic diet has included each day the following foods: One quart of milk; one or more eggs; two liberal servings of succulent vegetables and a similar amount of fruit, part of which is fresh and preferably raw; one serving of meat; plenty of butter; and a teaspoonful of cod liver oil. Other foods, including starches, cereals, and sweets are allowed as desired in addition to the above, as long as they do not replace in any degree any of the prescribed foods.

The diet just described differs from the usual diet of children, the degree and emphasis of difference varying with the geographic area and with the racial, social, or economic level. Certain characteristics are observable in all categories, however. The average consumption of milk is suboptimum throughout the country. The supply of vitamin D is similarly deficient, especially during the school months and in the northern areas. The level of protein intake for children is low, probably in proportion to the level of milk intake. The diets in common use consist of foods low in protective value.

In individual children, it is possible to reduce tooth decay to a negligible level through control of diet. If we could change our national food habits, the same could be accomplished for the population at large. Before this is brought about, however, there must be more widespread recognition of the importance of proper eating. The most tangible approach is through the medium of education in food values and meal planning.

A PLAN FOR IMPROVING SCHOOL LUNCHES

By Miss Leone Pazourek
Nutrition Consultant
Illinois State Department of Public Health

One of the chief tasks of health education is to teach children to select adequate meals and to develop in them the desire to do so. The school lunchroom is an ideal laboratory for the practical application of this knowledge. However, few schools, as far as I know, are adequately utilizing this opportunity.

The increasing knowledge of nutrition continues to emphasize the necessity of proper feeding for good child health, but it is quite difficult to feed a child properly if his noon meal is inadequate. The relationship between the nutritive status of the child and his scholastic accomplishments have also long been known.

The staff nutritionists of the Illinois State Department of Public Health devote considerable time to consultation service with school administrators, teachers, and lunchroom managers, to assist in the promotion of a good school lunch program.

Most of the cafeterias visited offer the pupils well-prepared foods from which an adequate lunch could be chosen, but it is appalling to see how few are choosing balanced lunches! Many of these students can glibly recite in the classroom what constitutes an adequate lunch, but their trays are evidence that the knowledge is not applied to their daily living!

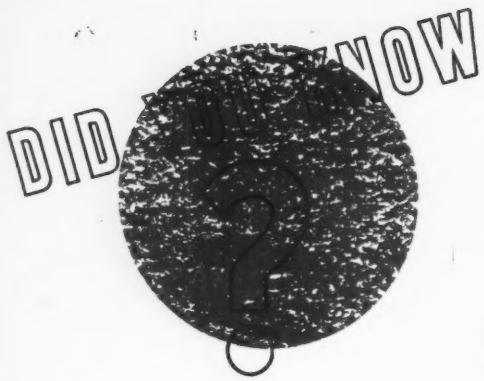
However, some interested school administrators, principals, and cafeteria managers in Illinois have made their school cafeterias ideal laboratories for the practical application of nutrition knowledge by instituting the following procedures:

Operate the cafeteria directly under the Superintendent of Schools as self-sustaining and non-profit making.

Choose a manager who is a graduate of a four year Home Economics course, including preparation in lunchroom management and education.

Maintain an attractive and sanitary cafeteria.

(Continued on Page Four)



—that dairy products are the largest single source of agricultural income in the United States?

—that nervous breakdowns are sometimes due to lack of the B vitamins? Many nervous disorders are caused by a deficiency of these substances.

—that New Zealand contains more cows per capita than any other country in the world? The principal dairy product is butter.

—that Wyoming now ranks fifth among the dairy states of the nation in the production of Swiss cheese? The annual output is about 1,250,000 pounds.

—that about 40 per cent of the milk produced in this country is consumed as fluid milk and cream? More than one half of the milk produced is utilized in the making of manufactured products.

—that 275 million gallons, or 8½ billion portions of ice cream, are consumed in the United States yearly? About one sixteenth of the milk supply of the country is used in making ice cream.

—that lemonade was sold as a scurvy remedy by medieval pharmacists in Florence, although not until modern times has science understood the vitamin C value of fruits?

—that a new type of candy developed by the Bureau of Dairy Industry is a by-product of cheese? It is called "Wheyfers" because it is made from whey, a by-product in cheese manufacture.

THINGS YOU'LL LIKE TO READ

HOW TO BUY VITAMINS — Grace MacLeod. The Family Dollar, January 1940, page 5. Published at 11 West 42nd St., New York City. 10¢ a copy.

"All the vitamins essential to health are found in our daily foods," says Dr. MacLeod. She follows up this statement by pointing out the best food sources of the vitamins and giving a plan for wise budgeting of the food dollar.

FOOD, NUTRITION AND HEALTH— E. V. McCollum and J. Ernestine Becker. Published by the authors, Baltimore, Md., 1940. $1.50.

This fifth edition presents, in popular style, the established facts about the relation of nutrition to health.

FEEDING THE FAMILY — Mary Swartz Rose. Fourth Edition. Macmillan Company, 1940. $3.75.

The new edition of this popular book applies the latest findings in the field of nutrition to the daily problem of what to eat. It contains a wealth of practical, reliable information for everyday use by the lay reader and home economist alike.

PROXIMATE COMPOSITION OF AMERICAN FOOD MATERIALS — Charlotte Chatfield and Georgian Adams. U. S. Department of Agriculture Circular No. 549. Superintendent of Documents, Government Printing Office, Washington, D. C., 1940. 15¢.

Data are provided for about 2,000 foods. Information given includes the percentages of protein, fat, ash, carbohydrates, and water of each of the foods listed, and the fuel value in terms of calories.

ESSENTIALS OF A GOOD LUNCH

The school lunch, whether it is a hot meal procured in the school cafeteria, or a cold lunch carried to school in one of the many varieties of lunch boxes, should include foods which contribute to growth, activity, and health of the school child. It should be planned to meet one third of the day's food requirements. For the child who is not adequately fed at home, the school lunch becomes an opportunity to make up in part for the deficiencies of other meals.

Nutritionists of the Illinois Department of Public Health meet pupils in all parts of the state who do not know the essentials of an adequate lunch. Others may have this knowledge but require constant encouragement to put it into practice. We encourage school lunchroom managers and teachers to post the following essentials of an adequate lunch in a conspicuous place in the lunchroom or classroom:

"An adequate lunch consists of:

½ pint milk — as a drink or in food.

Serving of fruit or vegetable, or both.

Substantial dish—such as soup, chowder, sandwiches, macaroni and cheese, creamed dishes, stews, baked beans."

Pupils become interested in scoring their lunches, and take great pride in selecting from the cafeteria counter, or bringing in the lunch box, an "A" lunch. Soon the practice becomes a habit, and thus an effective lesson in nutrition has been taught through the school lunch program.

—by Leone Pazourek

A PLAN FOR IMPROVING SCHOOL LUNCHES

(Continued from Page Three)

Provide attractive foods from which an adequate lunch could be chosen at reasonable cost.

Serve a nutritive low cost plate lunch.

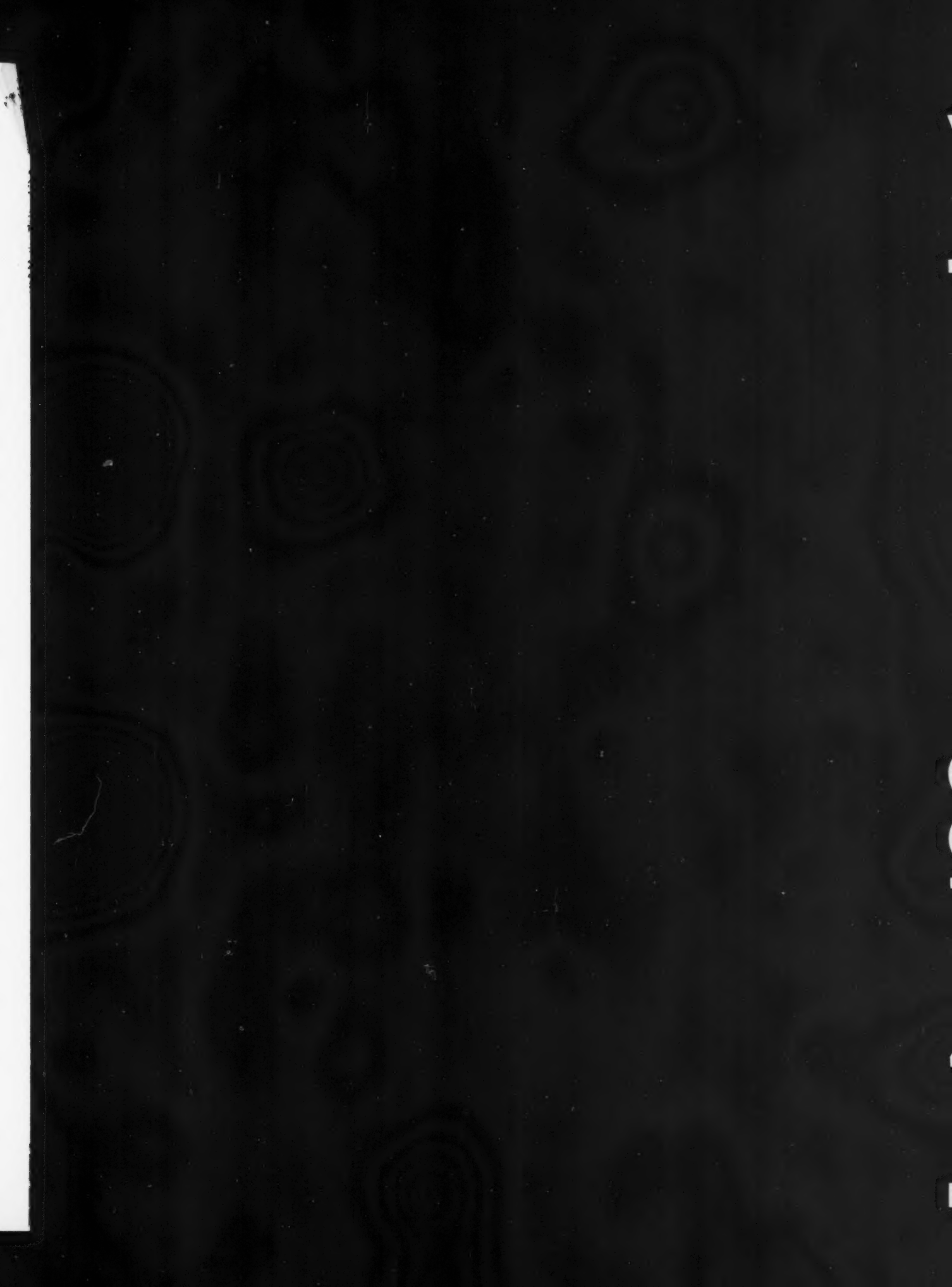
Make pupils who bring their lunches from home welcome in the cafeteria.

Prohibit the sale of candy or at least limit it to last ten minutes of lunchroom period.

Make available meal tickets with which no candy can be purchased.

Have one or more faculty members present to assist young pupils in food selection, to study food choices, cafeteria problems and recommend needed changes.

Help pupils apply classroom learning in food requirements and values to selecting their lunches.

Use attractive posters to teach food values and selection.

Note—A mimeographed sheet containing references to all major items mentioned in NUTRITION NEWS may be obtained on request from the National Dairy Council, Chicago, Illinois.